Your Role in The Evidence-Building Ecosystem at ED

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October 19, 2022

IES Institute of Education Sciences

Abstract

- This session will highlight the critical role EIR grantees play in the Department of Education's work to build rigorous evidence of "what works" to improve outcomes for all learners. IES Commissioners Albro and Soldner will describe the key features of the evidence-building ecosystem at ED, and how the work of EIR grantees contributes to the Department's larger mission. Grantees will learn about opportunities to take advantage of Department and other resources that can strengthen their work and how collaboration with ED can further accelerate the scaling process for successful interventions.

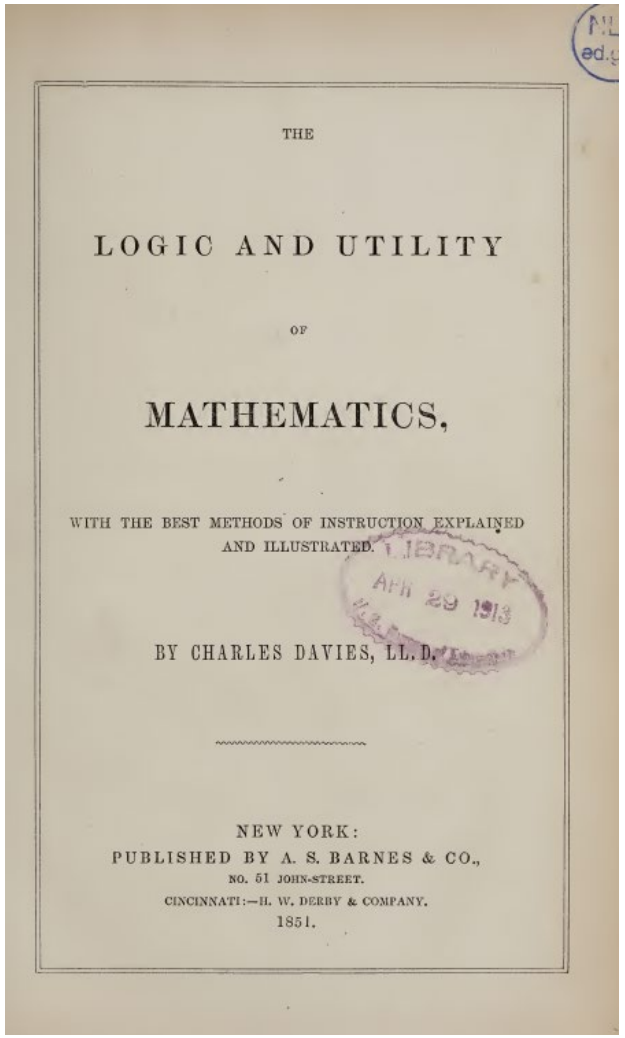
Agenda

- What's Evidence?
- The Evolution of Evidence-Building At ED
- Measures Matter
- Methods Matter
- Mobilization Matters
- Q&A

What's Evidence?

We're Part of a Robust Tradition

- Scholarship on curriculum, instruction, and other education topics spans hundreds of years.
- The earliest record in ERIC is Davies (1851).
- Check it out at https://eric.ed.gov/?id=ED620491



THE

LOGIC AND UTILITY

OF

MATHEMATICS,

WITH THE BEST METHODS OF INSTRUCTION EXPLAINED AND ILLUSTRATED.

LIBRARY APR 29 1913

BY CHARLES DAVIES, LL.D.

NEW YORK:
PUBLISHED BY A. S. BARNES & CO.,
NO. 51 JOHN-STREET.
CINCINNATI:—H. W. DERBY & COMPANY.
1851.

Fast Forward to 2001

- In 2001, Congress passed *No Child Left Behind,* reauthorizing the *Elementary and Secondary Education Act of 1965*.

- Among its many tenets was the idea of *scientifically based research*, and the role of research in school improvement.

- Congress had strong ideas about what constituted scientifically based research!

NCLB §9101

- Systematic
- Empirical
- Rigorous
- Hypotheses
- Reliable
- Valid
- Experimental
- Quasiexperimental
- Peer Reviewed

"(37) SCIENTIFICALLY BASED RESEARCH.—The term 'scientifically based research'—

"(A) means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs; and

"(B) includes research that—

"(i) employs systematic, empirical methods that draw on observation or experiment;

"(ii) involves rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;

"(iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;

"(iv) is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;

"(v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings; and

"(vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.

2015 (And Today)

- The *Every Student Succeeds Act of 2015* replaced NCLB, and shifted the conversation from "scientifically based research" to "evidence based."

- The definition broadened the range of education research that could be considered "evidence," but made clearer distinctions between types of evidence.

- The *Education Department General Administrative Regulations*, EDGAR, added further specificity.

ESSA Definition	Tier	EDGAR Elements
… at least 1 well-designed and well-implemented experimental study	Tier I Strong Evidence	• Evidence at or above the tier that meets WWC standards • Overlapping sample • Relevant finding • 2 or more sites • 350 or more students
… at least 1 well-designed and well-implemented quasi-experimental study	Tier II Moderate Evidence	
… at least 1 well-designed and well-implemented correlational study with statistical controls for selection bias	Tier III Promising Evidence	• Relevant finding from a Tier I or Tier II study that doesn't meet the overlapping sample, multi-site, or large sample requirements *or* • A study that meets the ESSA Tier III definition
… based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes	Tier IV Evidence that Demonstrates a Rationale	… a key project component included in the project's logic model is informed by research or evaluation findings that suggest the project component is likely to improve relevant outcomes.

The Evolution of Evidence-Building at ED

Before 2002

- ED has had a learning and improvement function since its inception in 1979.

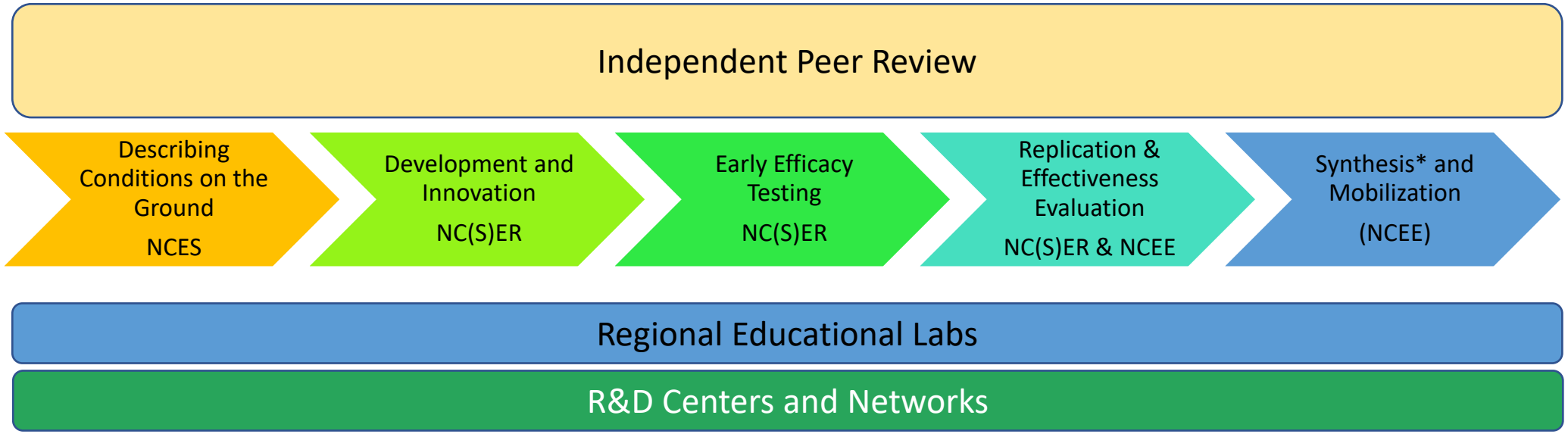
- From Section 209 of the *Department of Education Organization Act:*

There shall be in the Department an Office of Educational Research and Improvement … concerning research, development, demonstration, dissemination, evaluation, and assessment activities ...

After 2002

- Parallel to the enactment of NCLB, the *Education Science Reform Act of 2002* was passed.

IES Theory Of Action



WWC

ERIC

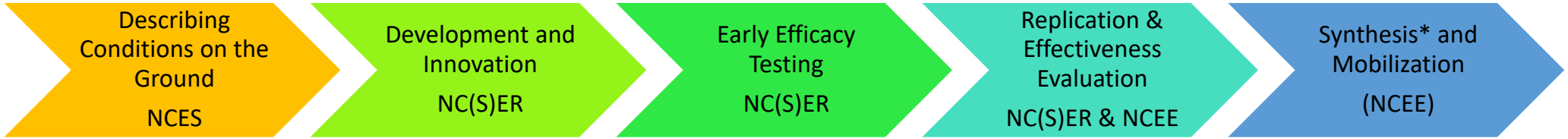
* NCEE has formal structures for Synthesis (e.g., WWC) although some NC(S)ER projects, both regular grants and R&D centers and networks, may also include this type of work.

Increasingly, Evidence Building at ED Is a Team Sport

- As part of the American Reinvestment and Recovery Act, the Department launched the Investing in Innovation (i3) grant program … which we now know as EIR!

- Other grant programs beyond EIR began to add the requirement that grantees use evidence in project design and build strong or moderate evidence of their project's effectiveness.

A Growing Cadre of Evidence-Building Partners

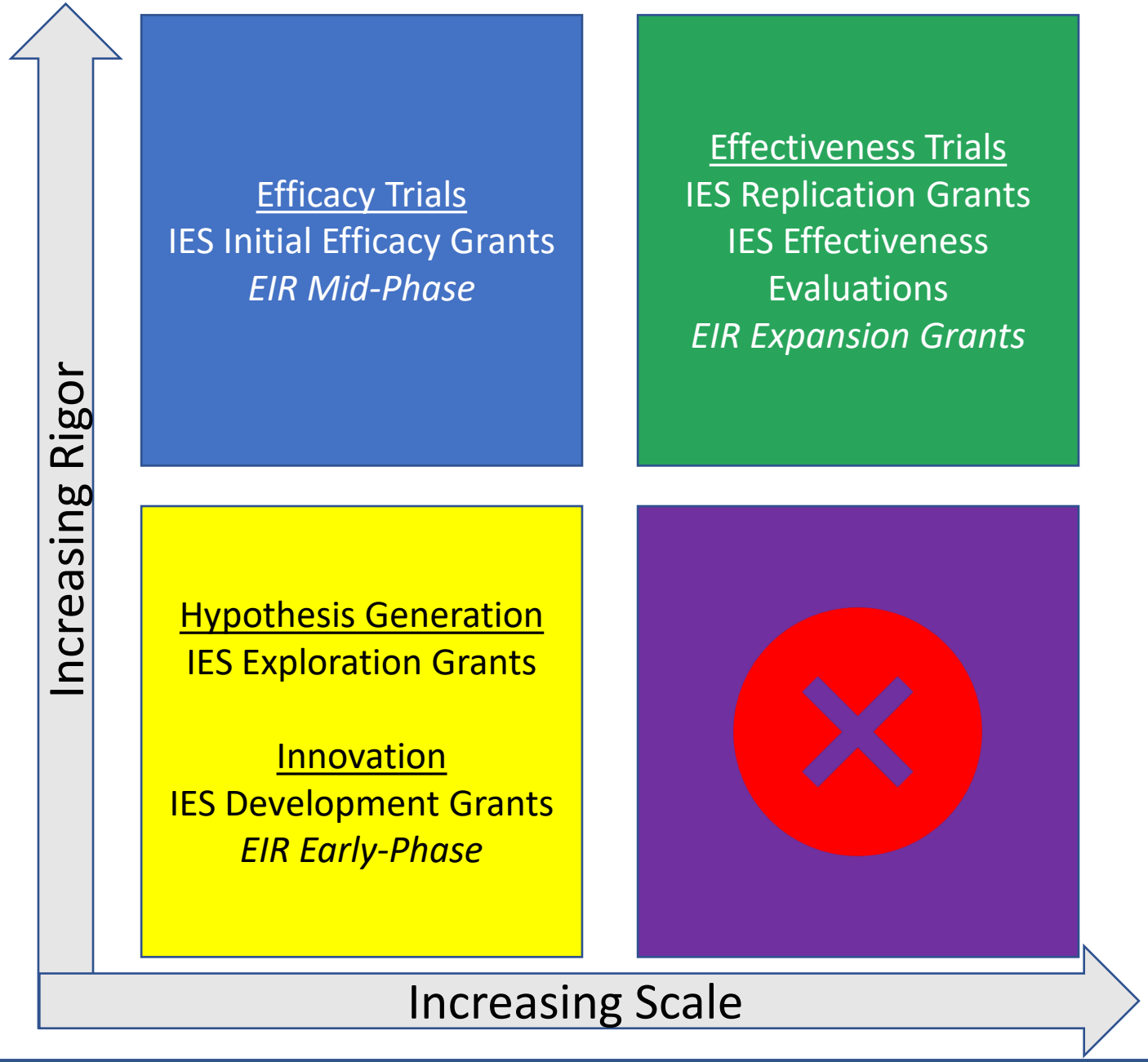


Education Innovation and Research

Supporting Effective Educator Development

Other Programs Across ED

- ED's goal is to drive research on education interventions "up and to the right" in this diagram.
- EIR grants, as well as other grants within the ED portfolio, play a complementary role to the work of IES' Centers.
- *Among other things, that means we want to ensure that your work gets the benefits of, is integrated with, and fulfills the responsibilities of the larger ED ecosystem.*



Measures, Methods, and Mobilization

Measures Matter

If you can't measure it, you can't improve it.

- IES has supported the development and validation of more than 200 measures across multiple content domains and for use with students, educators and parents.

- Many of those measures are available for YOU to use and information about those instruments can be found at https://edinstruments.com/.

Example IES-developed measures

- Measures of social-emotional competence and learning
  - Washoe County School District Social and Emotional Competency Assessments (WCSD-SECAs) are free and open-source and designed for use with 5th-12th graders
  - SELweb is a technologically delivered assessment suite for use with K-12 students
- Measures of early language and literacy
  - Individual Growth and Development Indicators (IGDIs) are brief, easy to use measures designed for use with preschool children
  - Phonological Awareness Literacy Screening in Spanish (PALS español) measures children's developing knowledge of the fundamental components of Spanish literacy in Kindergarten through third grade

Methods Matter

- You each are already working with well-qualified evaluators, and have access to technical assistance providers to support your effort to build high-quality evidence by meeting WWC standards.

- Resources created in support of IES' *Standards for Excellence in Education Research* (SEER), which you are *not* required to meet as EIR grantees, might be valuable to you.

  - Available at https://ies.ed.gov/SEER
  - Standards of interest where resources are already available include *cost analysis* and *data sharing.* Resources on *measuring implementation* are likely to be available in the Spring.

Mobilization Matters (1 of 3)
The ED Public Access Plan and IES Policy

- IES Public Access Policy (est. 2011)
- Expanding Public Access to the Results of Federally Funded Research (aka, Holdren memo, 2013)
- ED's Plan and Policy Development Guidance for Public Access (2016)
- Guidance to Make Federally Funded Research Freely Available Without Delay (released August 25, 2022)

- Publications + ERIC (grantee contribution to 'mobilization')
- Data sharing

Mobilization Matters (2 of 3) Implementation of Public Access

PUBLICATIONS

- IES and EIR both require that findings from completed research and evaluation be available to the public.
- IES requires that all peer-reviewed scholarly publications produced with IES funding be made publicly available in ERIC.
- EIR encourages grantees to submit their final studies to ERIC.

DATA SHARING

- A subset of IES grantees are required to make publicly available the data that supports the published findings (note: most of the data are restricted access)

Mobilization Matters (2 of 3)
The What Works Clearinghouse

- The WWC is more than just a set of standards for internal validity (that is, the extent to which we have confidence that an intervention *caused* an outcome).

- The WWC's primary mission is to *synthesize* research that meets its standards (meta-analysis) and to produce educator and policymaker-facing products that share lessons about "what works."

- We want (and need) for your work to appear in these syntheses, but that can only happen if we have access via ERIC to the research you conduct!

An Example of the Evidence Ecosystem: How to Reduce Teacher Stress

2009

- IES grantee Patricia Jennings develops a professional development program to enhance teachers' capacity to provide a supportive and engaging social and emotional context for academic learning.
- Cultivating Awareness and Resilience in Education (CARE) pilot test found improvements in teacher well-being, efficacy, burnout/time related stress and mindfulness

2012

- IES funded initial efficacy study found a relationship between CARE and teachers' social and emotional competence and the quality of their classroom interactions

2019

- In a current Early Phase EIR, Project CATALYZE: The Impact of CARE + PATHS on Students' Success, a student-focused SEL program was delivered by teachers who received the CARE PD program.

2021

- IES is now supporting a replication efficacy study to assess whether and how CARE improves outcomes for special education teachers, their classrooms, and their students with disabilities.

You are a critical component of the nation's education evidence-building infrastructure.

Thank you

Q & A